February 21, 2001

Director, Centers for Disease Control and Prevention and
Administrator, Agency for Toxic Substances and Disease Registry

Governance of CDC/ATSDR Information Systems

CDC/ATSDR Senior Staff

During discussions about how to organizationally structure the National Electronic Disease Surveillance System (NEDSS) initiative, it has become clear that NEDSS is but one example of an increasing number of cross-cutting projects that demonstrate the interdependence of all information systems with the information technology infrastructure of CDC/ATSDR and the public health system at large. The organizational solution to these interrelated issues rests in the overall framework for how CDC and ATSDR lead, govern, and manage the critical issues related to data, information systems, and information technology. Our current framework needs revision.

The attached governance decisions were derived following review of proposals and discussions across the agencies, examination of many options, review of governance processes at other similar federal agencies, and discussions with outside partners. These decisions represent the next phase in the evolution of the agencies' endeavors rather than a static solution. They build upon the significant progress that has been made in all of these areas, take into consideration the benefits and risks associated with various alternatives, and recognize that as these initiatives mature, other organizational and governance models may be more appropriate in the future. Consequently, this governance framework will be assessed biennially to determine if any changes in organizational roles and responsibilities are necessary based on agency needs and challenges. While the framework intentionally covers a broad spectrum of issues, priorities will be established to ensure sequencing of efforts based on criticality and urgency.

Information systems planning, development, operation, and governance are vital to the interests of CDC, ATSDR, and the nation's public health system, and should be given high priority considering the importance of these issues to CDC, your programs, and missions as you make various organizational, staffing, and committee representational decisions.

Accordingly, each CIO will have one member and an alternate to serve on the CDC Information Council. Such members should not only represent their organization, but also cross-cutting programmatic, informatics, and IT disciplines.

Please send the names of your representative and alternate to Jim Seligman (jds1@cdc.gov) by March 7, 2001. If you have any questions, please contact any member of the CDC Information Council Executive Committee (see Attachment 2).

/s/
Jeffrey P. Koplan, M.D., M.P.H.

2 Attachments:
CDC Organizational Assignment of Roles and Responsibilities for Agency-wide Information Systems
CDC Governance of Agency-wide Information Systems and Technology

cc:
Executive Director ASTHO
Executive Director NACCHO

Attachment 1

Centers for Disease Control and Prevention
Organizational Assignment of Roles and Responsibilities for
Agency-wide Information Systems

I. BACKGROUND

The cornerstone of the Centers for Disease Control and Prevention's (CDC)[1] and the Nation's public health system at all levels is timely and high-quality data and information for achieving the public health mission. More than ever before, information technology (IT) and complex integrated information systems and databases are needed to fulfill the data and information needs of public health. Issues of connectivity, IT infrastructure capacity, bidirectional data and electronic communications, distance learning, and public health informatics competency are vital to success. Moreover, CDC's State and local public health partners continue to encourage CDC to improve coordination of information system activities and public health's expanding partnerships and need for data from nontraditional sources such as managed care and clinical information systems warrants new approaches.

There is an unprecedented explosion of IT capabilities, pervasive use of IT in the healthcare sector, and a growing ubiquity of the Internet as a robust and high-speed means of electronic connectivity and communications. This convergence of healthcare informatics, public health informatics, and IT provides emerging opportunities for public health to reach new levels of scientific and programmatic advancement. However, CDC and its partners need to apply the necessary leadership, focus, resources, and follow-through to do the right things and do them well. Federal, State, and local governmental partnerships are key to success. The following modifications to CDC's organizational assignments of responsibility and establishment of a new governance framework for these areas are based on these principles.

II. GOALS

- Ensure the successful selection, implementation, and operation of integrated and interoperable public health information systems that support, enable, and advance the goals and objectives of the Nation's public health system, e.g., CDC's Governance Performance and Results Act Plan and *Healthy People 2010*, across all levels of the public and private sectors.

- Enhance the rapid and secure communication, sharing, and use of high-quality public health data and information for decision-making and scientific discovery.

- Strengthen information technology and systems at the local, state and national levels to improve public health practice.

[1] References to CDC include the Agency for Toxic Substances and Disease Registry (ATSDR).

- Leverage the agency's and our partners' expertise and address the collective requirements and constraints through effective engagement and participation.

- Promote and support research and development of new information technologies and systems to advance the state-of-the-art.

- Manage risks and maximize cost-effectiveness through standardization, reuse of solutions, and use of common systems, tools, and infrastructure.

- Ensure compliance with applicable federal laws, regulations, policies and standards.

- Ensure the privacy, confidentiality, security of data and information and the reliability and performance of information systems and the IT infrastructure.

- Implement organizational and governance structures that provide for creative, broad-based, effective, and rapid decision-making.

- Ensure that the agency's business and management information systems effectively support and serve the mission.

III. ASSIGNMENT OF ROLES AND RESPONSIBILITIES

Information systems, information management initiatives, and ongoing operations are inter-related, complex, essential to the agency's success, and contain substantial risks inherent in major process, philosophical, and technological change. Moreover, these initiatives are multidimensional in the breadth of professional disciplines needed as well as the decisions to be made, e.g. policy, resource allocation, project management, information technologies, and information content.

Specific organizational role and responsibility assignments are provided below. The document ACDC Governance of Agency-wide Information Systems and Technology@ delineates a new governance framework for the agency's management and oversight of information systems and information technology.

OD Office of Senior Advisor for Integrated Health Information Systems, CDC

- Provides primary leadership, oversight and coordination for agency-wide public health systems integration initiatives, including NEDSS, public health data standards development, the public health information systems aspects of the Health Alert Network (HAN), Epi-X, and similar CDC-wide systems.

- Ensures that enterprise-wide aspects of these systems are appropriately supported and managed.

- Has lead responsibility to coordinate implementation of NEDSS, HAN, Epi-X and similar CDC-wide decisions of the CDC Information Council and its Executive Committee (see ACDC Governance of Agency-wide Information Systems and Technology@).

- Serves as a single point of accountability for agency-wide public health system integration. In that context, reviews and oversees overall resource requests, budget justifications, and project implementation. Direct project management responsibilities remain at the program level in the respective CIO's.

- Identifies and promotes opportunities for cross-project collaboration. Identifies areas of cross-project conflict, and mediates, or if necessary arbitrates resolution.

- Assures a coordinated, cross-project team approach to working with state and local partners.

- Serves as official liaison to external organizational partners (e.g. ASTHO and its affiliates and NACCHO) to ensure ongoing collaboration on strategic directions, major architecture decisions, and other related matters.

Centers, Institute, and Offices

- Provide the primary subject matter expertise for information system programmatic requirements, functional characteristics, and data and information content. Also provide advice and input on public health partner and data provider/consumer needs, capabilities, and other factors affecting the design and operation of information systems.

- CIOs may be called upon to form and staff CIO-specific or cross-CIO task or project teams to carry out the development of new CDC-wide information systems or components thereof through research, evaluation, planning, development, testing, assurance and certification of proper and secure functioning. Such activities shall be conducted in coordination with the OD Office of Senior Advisor for Integrated Health Information Systems and all applicable policies, standards, or instructions from the CDC Information Council Executive Committee.

- Maintain, operate, upgrade, and provide user administration and support of application software, where appropriate, and all application system content, e.g. data and system and user documentation.

- Develop grants, cooperative agreements, and contracts to carry out project objectives. Ensure compliance with applicable legislative requirements, federal and CDC policies and standards, and CDC-wide coordination.

Information Resources Management Office

- Research, evaluate, develop, and operate the agency's central IT infrastructure components and systems. This includes hardware platforms, operating systems, and networking for

functions such as web development, databases, statistical and GIS servers, the secure data network (SDN) and directory services (public health directory). Functions include routine system back-up and recovery, capacity planning and monitoring, performance monitoring, security monitoring and response, etc.

- Provide continuous (24x365) operational support, monitoring, and management of central IT infrastructure and systems. Provide help-desk support for the infrastructure supporting the systems.

- Provide leadership in the development of the agency's enterprise architecture and associated policies, standards, and operating practices for technology and systems.

- Design, develop, and operate new or existing information systems or components thereof, as deemed appropriate, by the CDC Information Council and contribute systems expertise to agency teams as needed.

Attachment 2

Centers for Disease Control and Prevention
Governance of Agency-wide Information Systems and Technology

I. BACKGROUND

The Centers for Disease Control and Prevention's (CDC)[1] success in implementing information systems and strategies that are agency-wide and extend beyond the agency, such as integrated surveillance systems and electronic emergency notification systems, will be determined by how well the agency governs the process both internally and externally with our public health partners. Developing the integrated systems necessary to streamline surveillance efforts will require close collaboration internally among all CDC stakeholders and externally with traditional partners, as well as new partners such as health maintenance organizations, private laboratories, emergency rooms, etc. Agency-wide involvement needs to ensure that multidisciplinary expertise is engaged, the breadth of diseases and health conditions across categorical programs are addressed, and programs actively contribute to the success and adoption of solutions. Developing effective public health communication systems also requires active involvement of internal and external stakeholders and building teams with technical expertise to effectively develop, manage, and distribute content.

The Information Resources Management (IRM) Coordinators were established in 1986 to serve as the agency's primary group focusing on information systems and information technology (IT) planning, development, operations, and standards. However, with the explosion in IT and the increased use of information systems in the scientific and programmatic areas of the agency, the IRM Coordinators became more focused on IT infrastructure issues beginning in the early-to-mid 1990s.

The Health Information and Surveillance Systems Board (HISSB) was originally established in 1995 to advance the agency's integration agenda. Much progress has been realized since then, e.g., development of certain public health data standards; active engagement with the national standards development organizations to represent public health interests; building of partnerships with external stakeholders for integrated systems; advocacy for integration by policy, practice, and attainment of resources; and development of the approach, framework, and standards for integration of surveillance systems. However, the original 3-year charter of the Board has been exceeded and the agency is facing new issues and challenges in the integration arena that warrant a different agency governance structure.

Moreover, during the last several years rapid and profound changes have been occurring in the information landscape of CDC, public health, and the Nation in general. The tremendous explosion of the Internet, Web, E-Commerce, E-Government, online health information, etc., have fundamentally restructured some of CDC's approaches to health communications, data access and sharing, and opportunities for new digital relationships.

[1] References to CDC include the Agency for Toxic Substances and Disease Registry (ATSDR).

It is essential that the new governance process be structured to ensure efficient agency decision-making, multi-disciplinary input, engagement of public health partners, resource allocations in alignment with agency goals, and oversight of associated projects. Given these differing kinds of agency needs and roles, a multi-tiered governance structure is established as follows.

2. CDC INFORMATION SYSTEMS AND TECHNOLOGY GOVERNANCE STRUCTURE

The following existing information and IT governance groups are abolished and their functions are subsumed by the newly established governance structure.

Current Governance Group	**Membership**
Information Resources Management (IRM) Board	CDC Senior Staff
Health Information and Surveillance Systems Board (HISSB)	CDC-wide representatives
IRM Working Group	CDC ADMOs & OPS Directors
IRM Coordinators	Senior IT manager in CIOs and Staff Services

These governance groups are encouraged to engage agency experts, leaders, and managers, e.g. CDC Director and Deputies, CIO Directors, Associate Directors for Science (ADS), Associate Directors for Management and Operations (ADMOs), and others as may be necessary to make effective decisions.

- **CDC Information Council Executive Committee (CICEC)**

  The Committee's general charter is to:

  - approve agency information systems, IT policies, and CIC recommendations (see below) regarding architecture, technology, development and operation of CDC systems.
  - ensure accountability of project teams and organizations assigned responsibilities for these system efforts or any part thereof.
  - make resource allocation decisions on cross-cutting or unassigned funds, for example NEDSS and HAN.
  - serve as the forum for resolution of significant questions, disagreements, uncertainties, or inabilities to reach consensus on roles, responsibilities, resources, direction, etc., arising in the CIC.

  Membership: To best ensure impartiality and broad perspective, the CICEC will consist of staff from the CDC OD and the co-chairs of the CIC, including:

  - Deputy Director for Science and Public Health (Chair)
  - CDC Chief Information Officer

- CDC Associate Director for Policy, Planning, and Evaluation
- CDC Associate Director for Informatics/Director, Information Resources Management Office
- CIO co-chair of CIC
- Senior Advisor for Integrated Health Systems

- **CDC Information Council (CIC)**

The CIC Reports to CICEC. The Council will operate under a consensus decision-making model; however, decisions will be escalated to the CICEC when there is an inability to reach consensus in a timely fashion. The Council's general charter is to:

< generate new cross-cutting information and IT proposals
< oversee the development of the agency's enterprise architecture (EA)
< recommend agency-wide requirements, policies, & investments
< develop agency-wide standards, guidance, and procedures
< evaluate, monitor or oversee initiatives, programs, or projects
< serve as the primary forum to coordinate review and engagement on agency information and IT issues such as HHS Data Council, HIPAA, OMB data and information policies, and Standards Development Organization actions, e.g. HL 7.

Membership: For CIC to function effectively, membership must represent both CDC and key external partners, as well as both programmatic and IT perspectives. Accordingly, each CIO will have one member and designated alternate both of whom may attend the meetings. Such members should not only represent their organization, but also cross-cutting programmatic, informatics, and IT disciplines. CIOs should try and balance their representatives from more than one of the four functional areas: (1) public health program, (2) science, (3) public health informatics, and (4) information technology. The CICEC will review the identified representatives and may suggest alternative representatives in selected instances to ensure a well balanced CIC membership across the functional areas and disciplines. In addition, the CDC Associate Director for Science and one CIO Associate Director for Management and Operations (ADMO) to represent the business/management/administrative functions at CDC, will be members. Moreover, the CIC shall establish procedures to ensure broad sharing of information and involvement in issues through means such as workgroups, communication distribution lists, and websites.

Members will serve on a two-year rotational basis with staggered terms so that CIOs may have representation from different disciplines over time. Members of CICEC will also serve on the CIC.

In addition, CDC's primary state and local public health partners, i.e., the Association of State and Territorial Health Officials (ASTHO) and the National Association of County and City Health Officials (NACCHO) are invited as members, and ASTHO and its affiliates will develop a process to assure relevant representation from the affiliate

organizations.

Co-Chairs - CDC Associate Director for Informatics/Director, IRMO & elected representative from the CIOs.

< **Chief Technology Officers Committee (CTOC)**

Reports to CIC. Serves as the primary focus for research, evaluation, selection, testing and deployment of IT products and development of IT architecture, standards and procedures for IT infrastructure at the agency, e.g., distributed computing environment, networking, security, and office automation.

Membership: Senior IT manager in CIOs and Staff Services (currently designated as IRM Coordinators)
Co-Chairs - Director IRMO or designee & elected representative from CIOs.

< **Executive Secretariat**

The CICEC, CIC, and CTOC will share a common Executive Secretariat to help ensure agency-wide coordination of issues. The Executive Secretariat will reside in IRMO.

< **Others**

There are currently 10 committees under HISSB and 18 subcommittees or working groups under the IRM Coordinators that address a variety of issues and activities including policy and standards development, IT product research, evaluation and selection, procedures development, outreach, etc.

These committees, subcommittees, and working groups have made major contributions to CDC's information, information systems, and information technology environments but it is appropriate to assess the ongoing alignment of these groups, their charters, and roles under the new overall governance structure. Hence as a first order of business, the CIC and CTOC will undertake a review of the existing groups and determine the best composition, function, membership, and role for standing and ad hoc functional groups in consultation with the CICEC.

cc:
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Spelling verified by:DDudley, 2/21/01